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ABSTRACT

This research addressed the question of how preschool experiences will be reflected in later development. Both cognitive functioning and social behavioral adjustment were explored. The central focus was on attitudes conducive to achievement which The Demonstration and Research Center for Early Education (DARCEE) preschool program sought to develop -- motivation to achieve, ability to delay gratification, reflection, and the related construct of internal-external control. Subjects were 143 low-income black children and their families who had been associated with the DARCEE Intrafamily Study. Results showed that the strongest differences in favor of the target groups involved in the preschool program were on the measure of negative internal-external control. For the younger siblings, expected differences in favor of groups with maternal involvement were found only on the measure of behavior adjustment. The results of analyses investigating the relationships among these attitudinal variables indicated a considerable degree of situational specificity. Very few relationships reached statistical significance at or beyond the .05 level. Most conspicuous was the lack of significant relationship between these indices and ratings of behavioral adjustments in the school. Findings suggest that the view of these traits as highly generalized dispositions of the "component self" is an oversimplification. Appendices include the Internal-External Control Scale. (Author/MS)

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Abstract

This research has sought to investigate the long-term effects of three forms of preschool intervention on selected dimensions of affective development. On most of the attitudinal measures, differences tended to be minimal or opposite from the hypothesized direction. The strongest differences in favor of the target groups involved in the preschool program were on the measure of negative internal-external control. For the younger siblings, expected differences in favor of the groups with maternal involvement were found only on the measure of behavioral adjustment. The results of analyses investigating the relationships among these attitudinal variables indicated a considerable degree of situational specificity. Very few relationships reached statistical significance at or beyond the .05 level. Most conspicuous was the lack of significant relationship between these indices and ratings of behavioral adjustment in the school. These findings suggest that the current view of these traits as highly generalized dispositions of the "competent self" is an oversimplification. In future research, investigators should move toward further utilization and clarification of these situational variables.

The primary purpose of this research was to investigate the residual or long-term effects of the second in a series of major intervention programs involving low-income preschoolers conducted at Peabody's Demonstration and Research Center for Early Education (DARCEE).

The first of these programs, the Early Training Project, was initiated by Gray and Klaus (1959). This project, designed to provide organized experiences to enhance the child's chances of coping effectively with formal schooling, provided two groups of preschool children with special ten-week summer sessions and regular between session home visitations. Subsequent to the intervention program, it was found that the experimental children, as compared to controls, exhibited superior performance which was maintained on follow-up testing. Moreover, the younger siblings of the experimental groups were found to be superior to the younger siblings of the controls. This latter unexpected program effect, which appeared to be associated with the attention given the mothers of the preschool populations, served as a point of departure for the Intrafamily (Vertical Diffusion) Study (Gilmer, 1969; Gilmer, Miller, & Gray, 1970).

This second intervention program attempted to explore more systematically the conditions and agents of change which enhance vertical diffusion of cognitive stimulation within a family. Three experimental treatments, involving (1) a special preschool program with classroom involvement for both mother and target child, (2) a mother-home visitation program, and (3) a preschool program for only the target child, were contrasted with various control conditions. There were various control conditions. Results over time for the target children showed increased and sustained gains in performance, superior to those of the controls, for all treatment

groups up to school entrance. It was also found that performance scores for the younger sibling groups having maternal involvement were significantly higher than those scores for groups where the mother was not involved.

With this most recent program, DARCEE's intent to investigate the potential of vertical diffusion and the differential effect of the mother's involvement in the treatment program has been realized. Yet, a crucial issue still remained: will the effects of intervention be maintained as the child goes through the formal learning processes of school? In approaching this issue, the need for continued measurement of cognitive development is evident. Assessment of cognitive skills, however, covers only one dimension of the child's ability to cope effectively with formal schooling. The attitudes necessary for sustaining developed skills and continuing the developmental momentum are of equal importance.

One of the overarching goals of the preschool curriculum was to develop in the children attitudes that would be conducive to active participation in the learning process of the school. Positive attitudes relating to school-type activities, particularly the ability to delay reward, motivation to achieve, and the tendency toward reflection, were systematically programed into the curriculum. In addition, by carefully sequencing activities and tasks to develop these motivations, the curriculum hoped to promote in the child a greater feeling of personal control.

The present investigation was designed as a three-year follow-up of the Intrafamily Study--addressing the question of how preschool experiences will be reflected in later development. Both cognitive functioning and social-behavioral adjustment were explored. Central focus, however, was

on attitudes conducive to achievement which the preschool curriculum hoped to develop. These variables--motivation to achieve, ability to delay gratification, reflection, and the related construct of internal-external (I-E) control--have not previously been measured in the Intrafamily Study. Data regarding the cognitive domain are presented in a following paper.

The major experimental questions asked in this study are as follows: (1) Will target children in the treatment groups be differentiated on attitudinal variables related to school success and, if so, is there a vertical diffusion of these noncognitive program effects to their younger sibling? (2) Is the mother's program involvement a crucial factor in developing these attitudes? (3) What are the relationships among the variables assessed?

Theoretical Orientation

Before stating the specific hypotheses to be investigated, the general theoretical orientation relating to the central concepts of the study will be presented. This will include (1) a discussion of the current theoretical conception of competence which served as a basis for the incorporation of these concepts in the DARCEE curriculum and (2) a brief overview of the literature regarding each variable.

Conceptualizing the Nature of Competence

The notion of "competence" gained particular prominence in developmental research following an essay by Robert White (1959). In this classic paper, White postulated that man shares with other mammals an intrinsic motivation toward competence--toward effective interaction with the environment. It was White's contention, however, that the motivation needed to

attain competence could not be wholly derived from the "drives" of the motivational theory that until recently prevailed in experimental psychology, or the quiescence-seeking instincts of Freudian psychoanalysis. White cited evidence to support an independent and distinct role for such motivation, which he labeled effectance, to account fully for man's capacity to deal effectively with his surroundings. For White, effectance incorporated an important motivational ingredient overlooked by traditional theories, namely, the feedback that the developing person receives from the consequences of his active commerce with the environment.

White's conception of competence centers on biological origins and the developmental vicissitudes of individual motivation. More recent connotations of competence have reflected contemporary concern with its societally relevant outcomes. Inkeles (1966) proposed a definition of competence that stresses the societal referent: "the ability to attain and perform in three sets of statuses: those which one's society will normally assign one, those in the repertoire of one's social system that one might reasonably aspire to, and those which one might reasonably invent or elaborate for oneself [p. 269]." Inkeles suggests that the study of socialization be approached from the standpoint of societal expectations and socialization outcomes rather than from that of biological origins and the impact of child rearing practices.

Gladwin (1967), in a report on a conference of mental health professionals held at the National Institute of Mental Health, offered a conception of social competence similar to Inkeles. He proposed that competence develops along three closely related axes (1) the ability to learn or to use a variety of alternative pathways to achieve one's goals, (2) the

ability to utilize the resources of a variety of social systems, and (3) the capacity to effectively test reality. Programs of intervention appropriate to this conception were seen by Gladwin as operating primarily through the provision or adaptation of a social environment designed to maximize rewarding and effective social experience.

Overview of the Literature

The implication of these current conceptions of competence have had far reaching effects in psychological research. The empirical assumption inherent in the work of many contemporary theorists is that there is a core of interrelated personal attributes which in some way plays a crucial role in a person's effectiveness in interaction with the environment. These variables--including motives, values, beliefs, and orientations--are seen as relatively enduring attributes of the "competent self."

Against this background, a number of themes have emerged which are intended to refer broadly to various kinds of dispositions and behavioral tendencies relevant to achievement. The most extensively studied has been the "need for achievement" defined by McClelland (1953) as a tendency to strive for success when one's performance is evaluated against a standard of excellence. Implied in this concept is the desire to learn something new, to improve one's performance, and to do for oneself rather than being done for. This motive, measured usually in fantasy productions, has been found to be positively related to socioeconomic status (Bruckman, 1966; Nuttal, 1964; Rosen, 1959). High need for achievement has also been found to be associated with achievement training by both parents and early home training in independence by the father (Atkinson & Feather, 1966; McClelland, 1961; Rosen & D'Andrade, 1959).

Another predisposition which is strongly associated with competence is Rotter's "sense of personal or internal control of the environment" (Rotter, Seeman, & Liverant, 1962). This construct is described as a generalized expectancy regarding the extent to which significant events are perceived to occur as a function of one's own behavior (internal control) or as a function of forces outside one's personal control (external control). In its broadest meaning, it refers to the degree to which people have a sense of efficacy or power, and accept personal responsibility for what happens to them. Rotter (1969) has noted the relationship of perceived internal versus external control to research on achievement motivation, to White's (1959) concept of competence motivation, and to a sense of powerlessness, as a sociological concept of alienation (Seeman, 1969). It has been applied more specifically to youngsters in intellectual achievement situations through a questionnaire which assesses the extent to which favorable reactions from parents, teachers, and peers are believed by the child to depend either upon the quality of his own efforts or upon factors such as luck or the personal bias or whim of the evaluator (Crandall, Datkovsky, & Crandall, 1965). A number of studies have linked a sense of internal control to grade point average (Lessing, 1969), achievement test scores (Chance, 1965; Crandall et al., 1965; McGhee & Crandall, 1968), and school room achievement behavior among grade school children (Chance, 1965). Perceived internal control has also been found to be stronger in the middle class than in the working class (Battle & Rotter, 1963; Crandall et al., 1965), and in white children and adults than in blacks (Crandall et al., 1965; Lessing, 1969).

The notion of "ego strength" has figured prominently in discussions of competence. Considered judgment and persistence in contrast to impulsiveness have been considered noncognitive tasks in the successful application of intelligence to problem solution. Empirical support for this contention has come from studies showing the relationship between measures of impulsivity and other criteria of intelligence or intellectual accomplishment. Adolescents characterized as impulsive because they are delinquent (Corotto, 1961), or because they were so rated by teachers and supervisors (Spivack & Levine, 1963), were found to perform poorly on intelligence tests. Special measures of impulsivity (e.g., drawing a line as slowly as possible, controlled association, time sense) also correlated negatively with intelligence-test performance. A few studies have been done relating these dispositions to social adaptation. A lack of persistence evident since childhood was one of the outstanding traits of Terman and Oden's (1947) underachieving superior individuals. Davids and Sidman (1962) showed that bright (as measured by I.Q. tests) underachievers were relatively more impulsive than successful students who were equally bright. Spivack and Levine (1963) found that tests of impulsivity tended to differentiate well-functioning normals from adolescents of above average intelligence who had been transferred for residential treatment.

The ability to delay immediate gratification for the sake of later, larger outcomes is generally recognized as an important prerequisite for many achievement-relevant situations. This concept has been extensively investigated through the work of Mischel (1966). These studies typically employed a research paradigm in which subjects are confronted with real choices between immediately available but less valued rewards as opposed

to delayed but more valued outcomes. The results provide evidence that delay responses are relatively consistent, tend to increase with age, and are systematically related to a number of variables involving impulse control (Mischel & Gilligan, 1964). Studies have demonstrated positive relationship between the tendency to delay gratification and measures of social responsibility, achievement motivation, and certain child rearing conditions.

This brief overview of research has presented evidence to suggest a group of self-attitudes and personal orientations that are assumed to bear upon the extent to which a child is oriented to make the most of his opportunities in the world. Predictions concerning the long term impact of the DARCEE preschool program on these attitudinal dimensions and the relationships among these constructs are presented below.

Hypotheses

The following hypotheses are suggested concerning intervention effects:

(1) Target children in all treatment groups achieve a higher score on measures of attitudinal development and behavioral adjustment than those in groups with no program involvement.

(2) Target children in groups with maternal participation achieve a higher score on measures of attitudinal development and behavioral adjustment than those in groups with no maternal involvement.

(3) Target children in groups involved in only the classroom program achieve a higher score on measures of attitudinal development and behavioral adjustment than those in groups with no program involvement.

(4) Younger siblings in groups having maternal participation achieve a higher score on measures of attitudinal development and

behavioral adjustment than younger siblings in groups with no maternal involvement.

(5) There is no significant difference between the attitudinal and adjustment scores of younger siblings of the classroom group and the younger siblings of the group with no program involvement.

In investigating the relationships among the major variables of the study, two general hypotheses are suggested:

(1) The attitudinal constructs--delay of gratification, reflection, internal-external control, and achievement motivation--are positively related to each other.

(2) Behavioral adjustment is positively related to the measures of attitudinal development.

Method

Subjects

The subjects in the present study were 143 low-income black children. All of the children had been associated with the DARCEE intrafamily (Vertical Diffusion) study (Gilmer, 1969; Gilmer, Miller, & Gray, 1970). These children had originally been selected from a large, predominantly black housing project whose inhabitants would be considered moderately disadvantaged. Table 1 presents the age characteristics of the subjects.

Miller (1967) described the general design of the study. There were three treatment groups included in the program. In the first group, designated the Maximum Impact Group, both the mother and target child participated in a training program at the preschool center. The program for the mothers was a sequential process of skill development and movement from directed observations to actual classroom participation in a teaching

Table 1

Grade in School and Age at Time of Follow-Up Assessment of Children Included in the Study

Grade	Age		
	N	Mean (Yr. and Mo.)	Range (Yr. and Mo.)
First	28	7-0	6-7 to 8-1
Second	35	8-1	7-0 to 8-8
Third	56	9-0	7-7 to 10-4
Fourth	24	9-10	9-5 to 10-4

capacity. The children's program was a broad developmental curriculum designed to foster socialization for competence. It was organized around the development of two major classes of variables: aptitudes for environmental mastery and attitudes necessary for continued growth.

In the second group, the target child was the only member of the family enrolled in a training program. This group was called the Curriculum Group. Here the children participated in a classroom program which was a replication of that received by the Maximum Impact Group. The third group, the Home Visitor Group, had no direct contact with the preschool center. The family was visited once a week by a home-visiting teacher who worked directly with the mother and used the target child to demonstrate techniques and procedures consistent with the classroom program.

In the two groups in which the children were involved in the DARCEE classroom, the children were between three and four years of age at the inception of the study. In the Home Visitor Group, the target children were one year older than the children in the classroom group.

All the families in the study had other children who were younger than the ones involved in the preschool experience. The only restriction on the age of the younger siblings was that they should be at least 18 months old at the beginning of the study. With the exception of the Home Visitor Group, these siblings did not participate directly in the program.

Table 2

Schematic Representation of the Groups Involved in the Study

Maximum Impact	
	*Mother
	*Target-aged Treatment Child
	Younger Sibling
Curriculum	
	Mother
	*Target-aged Treatment Child
	Younger Sibling
Home Visitor	
	*Mother
	*Target-aged Treatment Child (Home Visitor 1)
	**Younger Sibling (Home Visitor 2)
Front Wave I	
Front Wave II	
Younger Sibling Comparison Group	
	Mother
	Younger Sibling-aged Child

*Family members receiving treatment.
**Home Visitor 2 were younger siblings for the first year of the program, but became the child with whom the mother worked directly during the second year of the program.

(From Gilmer, Miller, & Gray, 1970, p. 9)

Table 3

Age at Time of Follow-Up Assessment
of Children Included in Each Group

Group	Age		
	N	Mean (Yr. and Mo.)	Range (Yr. and Mo.)
Target Children			
Maximum Impact	15	8-8	8-4 to 9-3
Curriculum	15	8-9	8-5 to 9-2
Home Visitor 1	14	9-7	8-3 to 9-7
Front Wave I	18	9-1	8-3 to 9-7
Front Wave II	18	9-9	9-6 to 10-3
Younger Siblings			
Maximum Impact	17	7-6	7-1 to 8-2
Curriculum	13	7-7	7-3 to 8-1
Home Visitor 2	14	9-2	7-0 to 8-4
Comparison	19	7-2	6-6 to 8-4

For purposes of comparison, natural environment groups were carefully selected to match the demographic characteristics of the treatment families. The first such group consisted of children living in the same housing situation, but whose enrollment in a local preschool program provided immediate assessibility and continuing follow-up potential. This group was labeled the Front Wave I Group. A year later, a second similarly constituted group, Front Wave II, was selected. A third group consisting of mother and child pairs who were comparable to the treatment families in the

study was designated the Younger Sibling Comparison Group. The children in this comparison group were selected to assure age compariability for the vertical diffusion aspects of the study (Gilmer et al., 1970). Table 2 presents the schematic representation of the groups involved in the study. The age characteristics of children in each group at the time of the present investigation are reported in Table 3.

Procedure

Three general types of procedures were used to assess the major variables of the study. In phase one of the study, the Stanford-Binet (L-M) was administered individually to each child. In a second phase, the attitudinal variables of need for achievement, delay of gratification, reflectivity, and internal-external control were assessed using individually administered tests and an experimental choice situation. Behavioral adjustment was measured through behavior ratings by classroom teacher. The major assessment instruments used are described below.

Measurement of achievement motivation. Achievement motivation was measured in the form of an open-ended aspiration question developed by Mischel (1961). The question is introduced in the context of "Let's pretend there is a magic man. Now let's pretend that the magic man who came along could change you into anything you wanted to be. What would you want to be?" Subjects were asked to answer in one word. After the first response was given, the question was asked: "What else would you like to be?" Responses were classified into "Occupational" responses and "Trait" responses, the latter being further subdivided into "Achievement Traits" and "Personal Traits." The first category included all responses mentioning an occupation or profession (e.g., teacher, pilot, doctor); the second

included all responses mentioning personal traits that appeared to be directly achievement-related (e.g., important, smart, successful); the third contained all other responses and consisted of traits that are not explicitly related to achievement (e.g., sweet, big, older, honest). The primary conceptual distinction between the aspirations in the first as opposed to the second and the third categories is that the former are clearly long-term aspirations of a career type, whereas the latter are not necessarily long-term goals, and are not explicitly career goals, but rather personal attributes. Subjects were scored from 2 to 0 for each response according to whether they gave an Occupational response, Achievement Trait response or a Personal Trait response, respectively.

Mischel (1961) investigated the usefulness of this short-cut method for measuring need for achievement (n Achievement) by examining the relationship between the responses in each of the three categories and the mean n Achievement scores as measured in response to the more standard TAT-type assessment procedure of scoring fantasy material. The n Achievement mean of subjects giving occupational responses as compared to all others was found to be significantly higher ($t = 3.88$; $p < .001$). Similarly, comparison of the mean n Achievement of subjects giving occupational responses or achievement responses versus all other responses is a t of 4.54 ($p < .001$), the former having n Achievement scores significantly higher than the latter. A Pearson correlation of .41 ($p < .001$) was found between Occupational responses, Achievement Trait responses, and Personal Trait responses (assigned values from 2 to 0) and n Achievement scores.

Measurement of reflection-impulsivity. To measure reflectivity, "Draw a Line Slowly" (DAL)--a motor inhibition test devised by Maccoby, Dowley,

Hagen, and Degerman (1965)--was employed (see Appendix A). The test consisted of a picture of two telephone poles with three wires between them and a fourth wire conspicuously missing. Subjects were first given practice drawing lines with a ruler and pencil on a blank sheet of paper. The experimenter then showed the picture, pointing out the missing wire, and the subject was told to draw in the missing wire with a ruler. The task was administered a second time. This time, however, the subject was instructed to draw the wire in "as slowly as you can." Scores on this dimension were obtained by subtracting the time taken to draw the line on the first trial from the time taken on the second trial.

Measurement of internal-external control. The measure that was used to assess internal-external control was a 15-item cartoon test originated by Phypers (1969). Phyper's I-E Scale (Appendix B) is an adaptation for grades 1-3 of the Intellectual Achievement Responsibility Questionnaire developed by the Fells Institute (Crandall, Datkovsky, & Crandall, 1965). The I-E Scale consists of cartoons relating to a variety of achievement and personal events in the school setting. For each event, the child is asked to choose one of two reasons (an internal or external control alternative) which best describes why that event might happen to him. Internal control alternatives reflected personal efforts or mistakes which were viewed as having direct effect on the outcome of events. External control alternatives included luck, chance, or the capricious moods or actions of others.

In the present study, a revision of Phyper's original cartoon format was made in which black children were depicted in the cartoon situations. Total I-E scores were computed by summing the number of items in which the

internal alternative was chosen. Separate subscales for positive and negative events were also computed. Phypers (1969) obtained good reliability for the I-E Scale for grades 1-3. Evidence for construct and discriminant validity is reported fairly extensively in the literature.

Measurement of delay of gratification. An actual choice between a small school related reward item now or greater similar reward items later was used to assess the tendency to delay gratification. As in previous studies (Bialer, 1961; Mischel, 1961; Phypers, 1969), this choice was offered as a "reward" for participating in the experimental tasks. To increase the desirability of the reward, each child was allowed to pick from three objects (an eraser, a miniature puzzle, a coloring book) the prize that he would most like to have.

Pushing the chosen object toward the subject, the experimenter asked each child:

> Which do you want, this _____ (name of object) right now, or two _____s (name of object) in one week (holding up two)?

If the subject chose "Now" he was given the single reward immediately. If "Tomorrow" was chosen, the reward was put into a large envelope, upon which the experimenter wrote the child's name and grade. The subject was then told that his teacher would give him the envelope in one week.

At the conclusion of the experimental procedure, each subject was told:

> Thank you very much. Now I'd like you to do me a favor. Let's not tell the other children what we did here--or that you won a prize.

Teacher rating procedure. In order to assess behavioral adjustment in the school setting, eight items from the "Pupil Behavior Rating Scale"

(PBR) developed by Bower (1960) were given to each classroom teacher (see Appendix C). These items consist of a variety of specific behavioral descriptions which are defined to constitute a presence or lack of adjustment. Teachers were asked to rate the extent to which the child's conduct, as observed in the school setting, approximates each behavioral description. A total adjustment score for each subject was derived by summing the ratings of the specific behavioral descriptions contained in the scale. Items were reversed in scaling so that a high total score reflects high adjustment.

Results

Types of Data Analyses Used

The technique employed to test hypotheses concerning group differences on each of the measures was applied linear regression (Bottenberg & Ward, 1963). This method utilizes categorical predictors in the formulation and analysis of research questions by comparing (a) the results of an attempt to estimate criterian values from a linear combination of the vectors corresponding to membership in mutually exclusive categories with (b) the results of comparable efforts in which no account is taken of membership in these categories (see Appendix). This technique was thought to be particularly suited to the present data since the scores for most of the variables in the study were not assumed to come from a multivariate normal distribution. Moreover, a regression approach to data analysis permited consideration of a large number of variables and interactions.

In line with previous research discussed earlier, it was reasonable to assume that the subject's age and intelligence had a bearing on the score obtained for most of the measures. To be certain that the influence

of these factors did not lead to erroneous conclusions, age and intelligence data were incorporated within the analyses.

Product-moment correlation coefficients were computed to test for hypothesized relationships between the major variables in the study. A correlational approach was chosen in order to assess the magnitude of relationships. This approach was also suggested in order to investigate possible changes in the magnitude of relationships between subjects based on the control factors of age and intelligence.

Intervention Program Effects

Table 4 reports the mean scores of each group for all of the variables of interest in the study. The results of group comparisons (excluding the Home Visitor 1 and 2 groups) on each of the major variables are presented in Tables 5-10. It can be seen that no significant differences between groups were found for measures of impulsivity and positive internal-external control. On the need for achievement measure significant group differences were found for only the target children. Contrary to our hypotheses, target treatment groups scored lower than the controls (Front Wave I and II Comparisons) on the need for achievement, and the Maximum Impact target group scored lower than those groups without maternal involvement. No significant differences were found for younger siblings on the negative internal-external control subscale. However, as hypothesized, treatment target groups scored higher than the Front Wave I and II comparison groups, and the Maximum Impact group scored higher than those groups with no maternal involvement. There was no significant difference between the Curriculum and the comparison target groups.

The most dramatic findings appeared on the behavioral adjustment measure. While significant differences were found in the expected direction for the younger sibling groups, group differences were found in the opposite direction for the target children. As anticipated, the Maximum Impact and Curriculum sibling groups were rated as better adjusted than the Younger Sibling Comparison group, and the Maximum Impact sibling group was rated as better adjusted than groups without maternal involvement. On the other hand, comparisons among the target children showed that children in these two treatment groups were rated as less adjusted than controls, and the Maximum Impact target group had a lower rating than those groups without maternal involvement.

An interest in the relative impact of the amount of maternal program involvement prompted a comparison of the two Home Visitor groups (Home Visitor 1, one year of treatment; Home Visitor 2, one year as younger siblings, one year as target child) on each of the variables in the study. These comparisons are presented in Tables 11-16. Significant group differences were found only on the negative internal-external control subscale and the behavioral adjustment measure. Contrary to what might be expected, the Home Visitor groups scored lower than the target-aged comparison groups on the negative internal-external control subscale, and Home Visitor 2 scored lower than Home Visitor 1 and the Front Wave comparison groups. As anticipated, the behavioral adjustment ratings for the Home Visitor groups were higher than those of the comparison groups, and children in Home Visitor 1 were rated as better adjusted than those in the comparison group.

Table 4

Mean Scores for All Groups on Each of the Noncognitive Measures

Group	Measures						
	Achievement Motivation	DAL	IE-	IE+	IEtot	Delay Gratification	PBR
Target Children							
Maximum Impact	2.60	16.00	5.40	5.80	11.20	1.60	15.59
Curriculum	4.00	20.70	5.86	5.80	11.66	1.30	16.36
Home Visitor 1	3.78	13.57	5.21	6.21	11.43	1.43	18.72
Front Wave I	3.94	26.22	5.00	5.94	10.94	1.60	16.52
Front Wave II	3.50	17.83	4.66	6.05	10.71	1.46	18.85
Younger Siblings							
Maximum Impact	3.47	19.70	3.88	5.53	9.41	1.29	21.64
Curriculum	3.46	21.30	3.54	5.85	9.39	1.23	20.08
Home Visitor 2	3.10	16.60	3.20	5.60	8.80	1.60	17.36
Comparison	3.28	14.60	4.58	5.10	9.68	1.42	17.88

Table 5

Group Comparisons on Need for Achievement Measure

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Target Children				
Is there a difference between the n Achievement scores for the Maximum Impact and Curriculum target groups and those of Front Wave I and Front Wave II?	2/180	3.513	.031*	Both treatment groups scored lower
Are the n Achievement scores for the Maximum Impact group different from those for groups without maternal involvement?	1/180	6.523	.011*	Maximum Impact scored lower
Is there a difference between the n Achievement scores for the Curriculum target group and those for Front Wave I and Front Wave II?	1/181	.554	.512	NS
Younger Sibling				
Is there a difference between the n Achievement scores for the Maximum Impact and Curriculum younger sibling groups and those of the Comparison group?	2/181	1.026	.361	NS
Are the n Achievement scores for the Maximum Impact sibling group different from those for sibling groups without maternal involvement?	1/181	1.370	.241	NS
Is there a difference between the n Achievement scores for the Curriculum sibling group and those for the Comparison group?	1/182	.738	.606	NS

*$p < .05$

Table 6

Group Comparisons on Reflection-Impulsivity Measure

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Target Children				
Is there a difference between the reflectivity scores for the Maximum Impact and Curriculum target groups and those of Front Wave I and Front Wave II?	2/180	.763	.528	NS
Are the reflectivity scores for the Maximum Impact group different from those for groups without maternal involvement?	1/180	.002	.959	NS
Is there a difference between the reflectivity scores for the Curriculum target group and those for Front Wave I and Front Wave II?	1/181	1.542	.225	NS
Younger Siblings				
Is there a difference between the reflectivity scores for the Maximum Impact and Curriculum younger sibling groups and those of the Comparison group?	2/181	1.082	.342	NS
Are the reflectivity scores for the Maximum Impact sibling group different from those for sibling groups without maternal involvement?	1/181	.922	.660	NS
Is there a difference between the reflectivity scores for the Curriculum sibling group and those for the Comparison group?	1/182	1.202	.265	NS

Table 7

Group Comparisons on Negative Internal-External Control Subscale

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Target Children				
Is there a difference between the IE- scores for the Maximum Impact and Curriculum target groups and those of Front Wave I and Front Wave II?	2/180	5.454	.005**	Both treatment groups scored higher
Are the IE- scores for the Maximum Impact group different from those for groups without maternal involvement?	1/180	4.812	.028*	Maximum Impact scored higher
Is there a difference between the IE- scores for the Curriculum target group and those for Front Wave I and Front Wave II?	1/181	5.971	.071	NS
Younger Siblings				
Is there a difference between the IE- scores for the Maximum Impact and Curriculum younger sibling group and those of the Comparison group?	2/181	1.010	.367	NS
Are the IE- scores for the Maximum Impact sibling group different from those for sibling groups without maternal involvement?	1/181	1.097	.296	NS
Is there a difference between the IE- scores for the Curriculum sibling group and those for the Comparison group?	1/182	.819	.631	NS

*p < .05
**p < .01

Table 8

Group Comparisons on Positive Internal-External Control Subscale

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Target Children				
Is there a difference between the IE+ scores for the Maximum Impact and Curriculum target groups and those of Front Wave I and Front Wave II?	2/180	.110	.895	NS
Are the IE+ scores for the Maximum Impact group different from those groups without maternal involvement?	1/180	.016	.895	NS
Is there a difference between the IE+ scores for the Curriculum target group and those for Front Wave I and Front Wave II?	1/181	.185	.672	NS
Younger Siblings				
Is there a difference between the IE+ scores for the Maximum Impact and Curriculum younger sibling groups and those of the Comparison group?	2/181	.621	.543	NS
Are the IE+ scores for the Maximum Impact sibling group different from those for sibling groups without maternal involvement?	1/181	1.210	.272	NS
Is there a difference between the IE+ scores for the Curriculum sibling group and those for the Comparison group?	1/182	.037	.841	NS

Table 9

Group Comparisons on Delay of Gratification Measure

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Target Children				
Is there a difference between the delay scores for the Maximum Impact and Curriculum target groups and those of Front Wave I and Front Wave II?	2/180	2.237	.107	NS
Are the delay scores for the Maximum Impact group different from those for groups without maternal involvement?	1/180	.190	.667	NS
Is there a difference between the delay scores for the Curriculum target group and those for Front Wave I and Front Wave II?	1/181	4.295	.036*	Curriculum group scored lower
Younger Siblings				
Is there a difference between the delay scores for the Maximum Impact and Curriculum younger sibling groups and those of the Comparison group?	2/181	.334	.721	NS
Are the delay scores for the Maximum Impact sibling group different from those for sibling groups without maternal involvement?	1/181	.508	.516	NS
Is there a difference between the delay scores for the Curriculum sibling group and those for the Comparison group?	1/182	.183	.672	NS

*$p < .05$

Table 10

Group Comparisons on Behavioral Adjustment Measure

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Target Children				
Is there a difference between the adjustment scores for the Maximum Impact and Curriculum target groups and those of Front Wave I and Front Wave II?	2/180	3.445	.033*	Both treatment groups were rated as less adjusted
Are the adjustment scores for the Maximum Impact group different from those for groups without maternal involvement?	1/180	4.458	.034*	Maximum Impact was rated as less adjusted
Is there a difference between the adjustment scores for the Curriculum target group and those for Front Wave I and Front Wave II?	1/181	2.384	.122	NS
Younger Siblings				
Is there a difference between the adjustment scores for the Maximum Impact and Curriculum younger sibling groups and those of the Comparison group?	2/181	5.837	.004**	Both treatment groups were rated as better adjusted
Are the adjustment scores for the Maximum Impact sibling group different from those for sibling groups without maternal involvement?	1/181	10.165	.002**	Maximum Impact was rated as better adjusted
Is there a difference between the adjustment scores for the Curriculum sibling group and those for the Comparison group?	1/182	1.340	.247	NS

*$p < .05$
**$p < .01$

Table 11

Comparison of Home Visitor 1, Home Visitor 2, and the Front Wave I and Front Wave II Comparison Groups on Need for Achievement Measure

Comparison	df_n/df_d	F	Probability	Meaning of Difference
Is there a difference between the achievement scores for the Home Visitor 1 and Home Visitor 2 groups and those of Front Wave I and Front Wave II?	1/180	1.435	.734	NS
Are the achievement scores for the Home Visitor 2 group different from those for the Home Visitor 1, Front Wave I, and Front Wave II groups?	1/180	.319	.580	NS
Is there a difference between the achievement scores for the Home Visitor 1 group and those for Front Wave I and Front Wave II?	1/181	1.638	.599	NS

Table 12

Comparison of Home Visitor 1, Home Visitor 2, and the Front Wave I and Front Wave II Comparison Groups on Reflection-Impulsivity Measure

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Is there a difference between the reflectivity scores for Home Visitor 1 and Home Visitor 2 and those of Front Wave I and Front Wave II?	2/180	3.623	.239	NS
Are the reflectivity scores for the Home Visitor 2 group different from those for the Home Visitor 1, Front Wave I and Front Wave II groups?	1/180	1.122	.285	NS
Is there a difference between the reflectivity scores for the Home Visitor 1 group and those for Front Wave I and Front Wave II?	1/181	1.638	.199	NS

Table 13

Comparison of Home Visitor 1, Home Visitor 2, and the Front Wave I and Front Wave II Comparison Groups on Negative Internal-External Control Subscale

Comparison	$dfn_{/dfd}$	F	Probability	Meaning of Difference
Is there a difference between the IE- scores for Home Visitor 1 and Home Visitor 2 and those of Front Wave I and Front Wave II?	2/180	.813	.028*	Comparison groups scored higher
Are the IE- scores for the Home Visitor 2 group different from those for the Home Visitor 1, Front Wave I and Front Wave II groups?	1/180	.008	.027*	Home Visitor 2 scored lower
Is there a difference between the IE- scores for the Home Visitor 1 group and those for Front Wave I and Front Wave II?	1/181	.063	.798	NS

*$p < .05$

Table 14

Comparison of Home Visitor 1, Home Visitor 2, and the Front Wave I and Front Wave II Comparison Groups on Positive Internal-External Control Subscale

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Is there a difference between the IE+ scores for Home Visitor 1 and Home Visitor 2 and those of Front Wave I and Front Wave II?	2/180	2.271	.551	NS
Are the IE+ scores for the Home Visitor 2 group different from those for the Home Visitor 1, Front Wave I and Front Wave II groups?	1/180	.027	.862	NS
Is there a difference between the IE+ scores for the Home Visitor 1 group and those for Front Wave I and Front Wave II?	1/181	1.607	.204	NS

Table 15

Comparison of Home Visitor 1, Home Visitor 2, and the Front Wave I and Front Wave II Comparison Groups on Delay of Gratification Measure

Comparison	df_n/df_d	F	Probability	Meaning of Difference
Is there a difference between the delay scores for Home Visitor 1 and Home Visitor 2 and those of Front Wave I and Front Wave II?	2/180	1.367	.256	NS
Are the delay scores for the Home Visitor 2 group different from those for the Home Visitor 1, Front Wave I and Front Wave II groups?	1/180	.025	.867	NS
Is there a difference between the delay scores for the Home Visitor 1 group and those for Front Wave I and Front Wave II?	1/181	2.724	.096	NS

Table 16

Comparison of Home Visitor 1, Home Visitor 2, and the Front Wave I and Front Wave II Comparison Groups on Behavioral Adjustment Measure

Comparison	dfn/dfd	F	Probability	Meaning of Difference
Is there a difference between the adjustment scores for Home Visitor 1 and Home Visitor 2 and those of Front Wave I and Front Wave II?	2/180	4.393	.013*	Home Visitor groups scored higher
Are the adjustment scores for the Home Visitor 2 group different from those for the Home Visitor 1, Front Wave I and Front Wave II groups?	1/180	4.186	.040*	Home Visitor 2 scored lower
Is there a difference between the adjustment scores for the Home Visitor 1 group and those for Front Wave I and Front Wave II?	1/181	4.521	.033*	Home Visitor 1 scored higher

*p < .05

Intercorrelations Among the Measures

Table 17 presents the intercorrelations among the measures of attitudinal development. Product-moment correlations between these attitudinal measures and the total scores for behavioral adjustment are presented in Table 18.

Table 17

Intercorrelations Among Attitudinal Measures

	DAL	IE-	IE+	IEtot	Delay of Gratification
Achievement Motivation	-.004	-.033	.157	.048	.017
DAL	1.000	.079	.011	.062	-.002
IE-		1.000	.125	.839**	.079
IE+			1.000	.612**	.078
IEtot				1.000	.106

**p < .01

Table 18

Product-Moment Correlations Between Attitudinal Measures and Total PBR Adjustment Scale

	Achievement Motivation	DAL	IE-	IE+	IEtot	Delay of Gratification
PBR	.012	.151	-.015	-.004	.000	.099

There are several interesting points to be noted from these data. First of all, no significant relationships were found among measures of need for achievement, reflection, internal-external control and delay of gratification. There was a tendency for high internal control over positive events to be related to need for achievement; however, this correlation fell short of statistical significance. It can also be seen that there is little association between positive and negative items on the internal-external control scale. Finally, and contrary to what was predicted, no relationship was found between measures of attitudinal development and behavioral adjustment.

Age Differences

Chronological age was expected to be positively related to several major variables in the study. Table 19 presents product-moment correlations between this developmental dimension and each attitudinal measure. Although a positive relationship was expected between chronological age and delay of gratification, none was found. A strong association was found between age and feelings of internal control; however, this feeling was significant only for scores reflecting feelings of personal control over negative events ($r = .301$; $p < .001$). No significant relationships were evident between age and measures of need for achievement, reflectivity, or behavioral adjustment.

Differences in Intelligence

Intelligence was another important factor discussed earlier as influencing certain variables in the study. As reported in Table 19, Binet IQ scores were positively related to measures of reflectivity and

Table 19

Product-Moment Correlations Between
Developmental Dimensions and Noncognitive Measures

	Achievement Motivation	DAL	IE-	IE+	IEtot	Delay of Gratification	PBR
CA	.115	.087	.301**	.113	.300**	.074	-.011
IQ	-.015	.282**	.073	.060	.105	.034	.221*

*p < .05
**p < .01

behavioral adjustment. Contrary to what might be expected, no relationship was found between IQ and delay of gratification. Intelligence scores showed no relationship to either I-E control or need for achievement.

Discussion and Summary

The primary purpose of this study was to investigate the long-term effects of three forms of preschool intervention on the development of attitudes related to school success. It was predicted that target children in the treatment groups would score significantly higher than those target-aged children with no program involvement. This prediction was confirmed for only one measure--the negative internal-external control subscale. Indeed, contrary to our expectations, the treatment target groups scored lower than the comparison groups on measures of achievement motivation and behavioral adjustment. The second prediction concerned the effectiveness of both maternal involvement and classroom participation as a model of preschool intervention. It was expected that the Maximum Impact group would score higher than all other groups on each of the measures assessed in the

study. Again, the negative internal-external control subscale was the only measure for which the hypothesis was confirmed, while significant differences in the opposite direction were found for the need for achievement measure and behavioral adjustment. The expected superiority of the target Curriculum group over the controls was not confirmed on any of the measures.

Hypotheses involving the younger sibling group were concerned with the importance of the mother as an agent in the vertical diffusion of program effects. It was hypothesized that the younger siblings of groups which had direct maternal participation in the program would score significantly higher on each of the measures. Behavioral adjustment was the only measure for which this hypothesis was confirmed. On this scale, children in groups with maternal involvement were rated as better adjusted. Finally, as predicted, there were no differences between the Curriculum sibling group and the comparison group on any other variables investigated.

The present investigation of the relationships among the major variables of the study provide a similarly interesting set of results. The measure of need for achievement showed no relationship to other attitudinal variables. Nor was it related to behavioral adjustment, age or intelligence. The motor inhibition test of impulsivity was significantly related to intelligence, but showed no relationship to age, behavioral adjustment, or the measures of attitudinal development. The negative internal-external control dimension showed a positive correlation to chronological age only. No significant relationships were found for both the positive internal-external control dimension and delay of gratification.

Two issues emerge in the light of this data. The first, a methodological issue concerns the reliability and validity of the test measures developed to assess each of the major variables. The second issue, a substantive and theoretical one, concerns the usefulness of these general concepts as effective predictors of achievement in the low-income child.

Achievement Motivation

As discussed earlier, the concept of need for achievement is one which at first glance appears to have much in common with competence motivation. There appear, however, to be several difficulties with the n Achievement variable as embodied in the fantasy-based measure from which McClelland's aspiration question was derived. These difficulties have been reviewed by Smith (1968) who suggested:

> There are questions about its generality, its applicability to women, its openness to influences that contaminate its value as a measure of motivation. The findings in regard to relationships to achievement-oriented behavior have been ambiguous, except as a predictor of entrepreneurial striving in business men. Given this less than encouraging record, one suspects that there has been slippage between the theoretical definition of the motive and what has actually been captured in the measurements [p. 242].

The question of the generality of the achievement motive is especially relevant to the present research. What has been interpreted as a lack of achievement motivation in low-income black pupils may well be a matter of its being directed into nonintellectual pursuits. Indeed achievement research over two decades has found little conclusive evidence concerning differences between black and white children on n Achievement. These findings and the lack of predicted relationships involving achievement motivation in the present study suggest that the global concept of achievement motivation is too broad and it may be useful to replace this construct with motives that relate to more specific behaviors. Individuals strive to

become competent in different areas, and the motivations for these strivings are multiple. Comprehension and prediction of these phenomena might be enhanced if there was some differentiation among the behaviors and motives that are involved in task mastery.

Delay of Gratification

The procedure used to assess the ability to delay gratification closely resembles those in the majority of studies in the literature. These investigations have found several behavioral, affective and demographic correlates of delay behavior, and lend support to the assumption that the ability to delay gratification is a general trait or dimension of personality, and that choice of immediate or delayed rewards is a reliable and valid measure of this trait. Recently these conclusions have been open to some question. Existing findings in the literature, most of which are reviewed by Phypers (1969), point to the highly variable nature of the traditional operational paradigm used to assess delay of gratification. They suggest that choice of immediate or delayed rewards is strongly influenced by a wide variety of situational factors which are difficult to control experimentally and which contribute to a generally unstable measure of delay. For example, numerous studies which have experimentally manipulated the contingencies involved in the choice procedure have found an increase in the tendency to choose immediately available awards a function of (1) length of delay interval (Mischel & Metzner, 1962), (2) the experience of general criticism of a subject's performance before being offered the choice (Shybut, 1965), and (3) the requirement to successfully complete an experimental task in addition to waiting in order to obtain a larger, future reward (Mischel & Staub, 1965). As previously noted in the studies

of Lawton (1963), Mischel (1963), and Mischel and Metzner (1966), differences have also been found when different experimenters have been used in the same study.

Although there was an attempt to hold the above factors constant, with the exception of the number of experimenters, it is not surprising that no hypothesized relationships involving the tendency to delay gratification were found. It has been speculated that the inadequacy of traditional delay measures may be in part a function of the operational paradigm of choice between a small reward now or a larger reward later which appears to conform to few behavioral examples of the tendency to delay gratification discussed in the literature (Phypers, 1969). In future research, operational procedures must have more relevance for subjects within the context of everyday life. The behaviors which we seek to assess need to be based upon situations which typically occur, or would be potentially relevant within the environment in which subjects must function.

Reflection-Impulsivity

Studies showing relationships between measures of impulsiveness and both intelligence and social adaptation have provided some degree of support for a view of competence which tries to relate affect, drive, and cognitive activity in the same theoretical system. In the present study, the motor inhibition test of impulsivity, Draw a Line, was significantly related to intelligence. The results also indicate that scores on this measure show a tendency to be related to behavioral adjustment ratings. While these results are in agreement with theoretical expectations, there is some reservation concerning the relevance of our findings for the concept of impulse control. As in previous studies (Maccoby, Dowley, Hagen,

& Degerman, 1965; Spivack, Levine, & Sprigle, 1969), high IQ children were more capable of inhibiting movement when instructed to do so. The question arises whether they have better impulse control or whether they are more able to follow any directions better than their low-IQ counterparts. Informal observations during this procedure suggest that the latter is a plausible alternative. It is apparent, in any case, that the degree to which the capacity to inhibit movement may be interpreted as impulse control requires further investigations.

Internal-External Control

While generally adequate reliability and validity have been reported for the I-E Scale for grades 1-3, the measure's internal consistency has been shown to be fairly low (Phypers, 1969). This finding indicates that internal-external control is a somewhat heterogeneous dimension and does not, as the literature suggests, reflect a generalized aspect of personality. The possibility of this assumption receives additional support from the present study. Correlations between positive and negative items on the I-E scale suggest that children's feelings of internal control over positive events are not related to their feelings of internal control over negative events, thus indicating two possibly separate dimensions of internal-external control. Indeed, while there were no group differences on the positive internal-external control subscale, there was significant differentiation, in favor of the groups that participated in the preschool curriculum, on the measure of negative internal-external control. An interpretation of this finding may be that the children involved in the preschool program gained a greater sense of personal control in school-related situations through their experiences in a consistently reinforced,

stable environment where negative as well as positive events were realistically under their own control.

Further evidence for a situational aspect of internal control has been provided in a recent study by Williams (1971). Williams found that in conditions of reduced expectancy for success and low reinforcement value, external locus of control subjects behaved externally in accord with the generalized characteristics of the I-E construct. In situations characterized by high levels of expectancy and reinforcement value, however, external locus of control subjects behaved in an internal manner--quite in contrast to expectations based upon a generalized I-E classification.

Existing findings in the literature, as well as those discussed above, suggest that both generalized and situational determinants are operative in influencing a person's sense of internal control. If feelings of personal control are in fact highly dependent on factors particular to given kinds of situations, such factors must be taken into account in future research.

Behavioral Adjustment

Bower (1960) has reported generally adequate reliability and validity for the Pupil Behavioral Rating Scale as a measure of behavioral adjustment in the elementary school. The scale has obvious face validity since it is based on a group of behaviors considered by professionals to represent adjustment in the school setting. It was noted that teachers, in making their ratings, tended to judge students with higher measured intelligence as better adjusted. This finding was expected, and was consistent with the results obtained by other investigations (Phypers, 1969) where

many of the behavioral indices were related to the interest shown toward academic tasks. In the group analyses, the influence of IQ was controlled.

An interesting finding in this study was that the target children involved in the DARCEE classroom program were rated as less adjusted than groups with no intervention program involvement. It may be that the spontaniety and assertiveness nurtured in the DARCEE classroom are incongruent with the behaviors appropriate for the more highly regimented elementary school classroom. This finding is possibly consistent with that of Kitano (1964) who found that children who had been enrolled in a permissive child-care program housed in a public school were rated by their teachers in the elementary grades as less well-adjusted to school than control children not enrolled in such a program. It should be noted, however, that the DARCEE approach can in no way be characterized as permissive.

This study presents a puzzling but interesting set of data. In interpreting the findings, it has been unclear whether the results reflect poor reliability and validity of assessment procedures or problems inherent in the facets of intervention upon which the predictions were based. Both possibilities have been discussed, particularly with regard to the generality of these concepts and the applicability of the operational paradigms used in their assessment. It should be noted that limitations in the design of the study, notably the lack of (1) assessment of these affective dimensions at the beginning or end of the intrafamily intervention and (2) comparisons of actual scores with indices of achievement, have precluded any definite conclusions. It is hoped, however, that this investigation has provided meaningful suggestions for future research in this area.

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APPENDIX A

"Draw a Line Slowly" Form

Name
Trial

APPENDIX B

I-E Scale

SUPPOSE ANOTHER KID HITS YOU

WOULD IT BE BECAUSE

YOU HAD DONE SOMETHING TO THE OTHER KID FIRST?

OR BECAUSE THE OTHER KID IS JUST MEAN!

SUPPOSE SOMETHING REALLY MADE YOU HAPPY

WOULD IT BE BECAUSE

YOU GOT LOTS OF PRESENTS

OR BECAUSE

YOU GOT A RIBBON FOR RUNNING FASTEST?

IF YOU ARE IN A RUNNING RACE AND YOU LOSE

WOULD IT BE BECAUSE YOU AREN'T TRYING HARD ENOUGH?

OR BECAUSE YOU DON'T HAVE THE RIGHT KIND OF SHOES?

IF THE TEACHER SAID THAT YOU ARE DUMB

WOULD IT BE BECAUSE

THE TEACHER WAS GROUCHY THAT DAY?

OR BECAUSE

YOU HAD NOT BEEN DOING GOOD WORK?

IF THE TEACHER TELLS YOU TO BE STILL

WOULD IT BE BECAUSE

YOU ARE NOT BEING QUIET?

OR BECAUSE

THE TEACHER WANTS TO BE MEAN?

SUPPOSE THE TEACHER LETS YOU GO OUT TO RECESS EARLY

WOULD IT BE BECAUSE

THE TEACHER WAS JUST FEELING GOOD?

OR BECAUSE

YOU FINISHED YOUR WORK EARLY?

SUPPOSE YOU TRY TO WORK A PUZZLE AND CAN'T DO IT

WOULD IT BE BECAUSE

YOU ARE NOT TRYING VERY HARD?

OR BECAUSE A PIECE OF THE PUZZLE IS MISSING?

WHEN YOU LEARNED TO WRITE YOUR NAME.

WAS IT BECAUSE

YOUR NAME IS AN EASY NAME?

OR BECAUSE YOU PRACTICED A LOT?

SUPPOSE THE TEACHER SAYS YOU ARE SMART

WOULD IT BE BECAUSE

THE TEACHER JUST LIKES YOU?

OR BECAUSE

YOUR SCHOOL WORK IS GOOD?

SUPPOSE THE TEACHER SHOUTS AT YOU

WOULD IT BE BECAUSE

SHE IS JUST MAD?

OR BECAUSE

YOU DIDN'T DO WHAT SH ASKED?

SUPPOSE THAT ONE DAY NONE OF THE KIDS WOULD PLAY WITH YOU

WOULD IT BE BECAUSE

YOU HAD DONE SOMETHING MEAN TO THEM?

OR BECAUSE

THEY JUST DIDN'T LIKE YOU?

IF YOUR MOM AND DAD SAY THAT YOU ARE SMART

WOULD IT BE BECAUSE

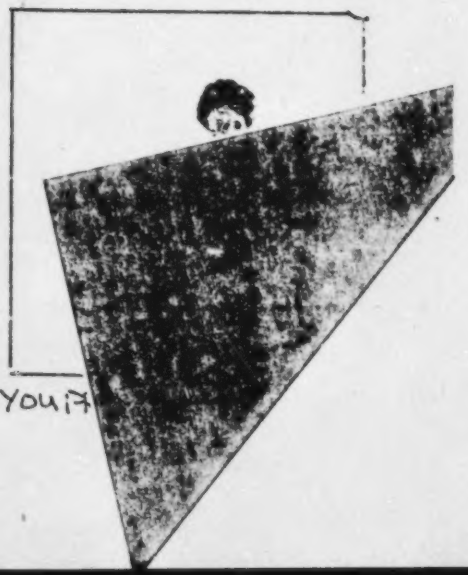
PARENTS ALWAYS SAY THAT ABOUT THEIR OWN KIDS?

OR BECAUSE YOU DO WELL IN SCHOOL?

SUPPOSE YOU WON A RUNNING RACE

WOULD IT BE BECAUSE

YOU HAD GOOD SNEAKERS?



OR BECAUSE YOU

SUPPOSE YOU COULDN'T UNDERSTAND SOMETHING THE TEACHER SAID

WOULD IT BE BECAUSE

THE TEACHER DIDN'T EXPLAINING ME—?

OR BECAUSE YOU DIDN'T LISTEN?

SUPPOSE YOU WERE WORKING A PUZZLE AND GOT IT ALL RIGHT

WOULD IT BE BECAUSE

YOU FOUND A MISSING PIECE?

OR BECAUSE

YOU TRIED VERY HARD TO WORK IT?

APPENDIX C

Pupil Behavior Rating Scale

Name of Pupil _____ Sex _____

School _____ Grade _____

Rater's Name _____ Date of Rating _____

Please rate the pupil's behavior as you have observed and experienced it. Place the code number of the appropriate rating on the line to the right of each statement.

1. THIS PUPIL GETS INTO FIGHTS OR QUARRELS WITH OTHER PUPILS....._____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.

2. THIS PUPIL HAS TO BE COAXED OR FORCED TO PLAY OR WORK WITH OTHER PUPILS....._____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.

3. THIS PUPIL HAS DIFFICULTY LEARNING....._____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.

4. THIS PUPIL IS INTERESTED IN ACTIVITIES WHICH HE CAN DO BY HIMSELF____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.

5. THIS PUPIL MAKES UNUSUAL OR INAPPROPRIATE RESPONSES DURING NORMAL SCHOOL ACTIVITIES....._____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.

6. THIS PUPIL BEHAVES IN WAYS WHICH ARE DANGEROUS TO SELF OR OTHERS____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.

7. THIS PUPIL IS UNHAPPY OR DEPRESSED....._____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.

8. THIS PUPIL BECOMES SICK WHEN FACED WITH A DIFFICULT SCHOOL PROBLEM OR SITUATION....._____
   1)seldom or never 2)not very often 3)not observed 4)quite often 5)most of the time.